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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,240

Applicant(s)

YAMAGUCHI ET AL.

Examiner

ADNAN BAIG

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/15/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/15/2009 have been fully considered but they are not persuasive for the following reasons.

In regards to applicant's arguments to Claim 1, the claim is not patentable over the Reference of record because Maeshima does disclose *a terminal* (see **Fig. 1 Terminals 100-107**) *including*:

a detection portion configured to detect the control frame, (Referring to **Fig. 3**, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see **Para [0045] lines 8-14**) where in the instance a control frame is not detected (i.e., **inconvenience**) from the master control frame, the slave terminals are capable of becoming the master control station (see **Para [0013]**) which means each of the terminals must be able to detect the control frame periodically, See **"Inconvenience in a control station can be detected"** in **Para [0087] lines 4-7 & Fig. 15 step S21**).

which is periodically transmitted from the control station (See **Para [0078] lines 6-12**, where Maeshima recites **"when the descending management information periodically transmitted from the master control cannot be received, it is determined that an inconvenience is occurring in the master control station"**

*the control frame containing control information indicating a time period in which access to the communication medium is permitted (see Para [0005] & [0045-0046]) where Maeshima discloses “**assigning fixed time slots**” for the communications terminals to transmit real data in the media transmission region. See “**access control**” in line 7 of Para [0005].*

*an issuance portion configured to issue a frame containing the control information of the control frame (See Para [0047-0048]) i.e., where Maeshima recites “**Slave control stations 103, 105, 107 transmit the management information during the section in which the descending control information described above is transmitted and control transmission of data by the respective communication terminals, when the function as the central control station is not carried out since an inconvenience occurs in the master control station 100**”*

*when the control frame is not detected over a predetermined first time period, (See Para [0007] & Para [0078] lines 12-19 i.e., “**descending management information cannot be received for some time continuously**”).*

In regards to applicant's arguments regarding the example in page 14, lines 10-19 of the specification where "*Control Station A periodically issues a control frame containing control information*" (see **Maeshima Para [0078]** lines 6-12).

"In the control information a time and a time interval are specified when media access by the controlled stations is permitted" (see **Maeshima Para [0005] & [0045-0046]**)

Maeshima does disclose "*the controlled stations are able to store the control information of the control frame in storage*" (see **Fig. 2 Items 21A, 21B & Para [0040]** where Maeshima stores control information).

In regards to applicant's arguments regarding Independent claims 18-20, the independent claims are not patentable over Maeshima for similar reasons to those discussed above with regard to Claim 1.

In regards to applicants arguments regarding Claim 21, Maeshima does disclose "*a memory portion operable to store the control information contained in the control frame*" (**See Para [0040] & Fig. 2 Items 21A, 21B** where control information is stored).

In regards to applicant's arguments regarding Claims 5-7, 9, 12, 13, 16-18, and 21, the following claims are not allowable based on their dependency from Claim 1.

In regards to applicants arguments regarding rejections under 35 U.S.C 103(a) for Claims 8, 10, 11, 14, and 15, the following claims do disclose or suggest all the elements from Maeshima based on their dependency discussed above with regard to Claim 1. The distinction to combine Isumi are such that one of ordinary skill in the art at the time of the invention would have been motivated to make the combination with the Reference of record because Isumi does disclose a "*competition between base stations*" as taught by Isumi see Col. 14 lines 30-55.

2. Applicant's arguments with respect to claims 3 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5-9, 12-13, and 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeshima et al. (Of Record).

Regarding Claim 1, Maeshima discloses a terminal (see Fig. 1 Terminals 100-107) operable to access a communication medium (See Para [0038]) in accordance with a control frame (See Fig. 3) issued by a control station (See Fig. 1 Terminal 100), the terminal comprising:

a detection portion configured to detect the control frame, (**Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically , See Para [0087] lines 4-7 & Fig. 15 step S21).**

which is periodically transmitted from the control station (see Para [0005] & Para [0078] lines 6-12),

the control frame containing control information indicating a time period in which access to the communication medium is permitted (see Para [0005] & [0045-0046])

an issuance portion configured to issue a frame containing the control information of the control frame (**See Para [0047-0048]**), when the control frame is not detected over a predetermined first time period, (**See Para [0007] & Para [0078] lines 12-19).**

Regarding Claim 5, Maeshima discloses the terminal according to claim 1, wherein the issuance portion periodically issues the frame containing the control information of the control frame, (**see Para [0078] lines 12-19 where Master periodically transmits descending control information)**

when the detection portion detects a frame, transmitted from the control station before a predetermined second time period elapses (**see Para [0078] lines 12-19 i.e., "time continuously"**) after the control frame has been most recently received, the issuance portion stops issuing the frame containing the control station information, (**see Para [0048] where Slave stations do not carry out transmission (i.e., stop) when the control station is transmitting frames**)

Regarding Claim 6, Maeshima discloses the terminal according to claim 1, further comprising:

a control station mode portion configured (**see Fig. 2 Items 21A, 21B**) to cause the terminal to operate as the control station unless the detection portion receives the control frame from the control station before a predetermined second time period elapses (**Para [0078] lines 12-19**), after the control frame has been most recently received, (**Referring to Fig. 11, the network terminals operate (i.e., configured) as the master control station in the event of not receiving control frames from the Master control station, see Para [0047-0048]**).

Regarding Claim 7, Maeshima discloses the terminal according to claim 6, wherein the control station mode portion (**see Fig. 2 Items 21A, 21B**) collects information required for the terminal to operate as a control station from another terminal, (**See Para [0040]**)

Regarding Claim 8, Maeshima discloses the terminal according to claim 6, wherein the mode issuance portion issues a reset signal to collect information required for the terminal to operate as a control station from another terminal, **(see Para [0007])**.

Regarding Claim 9, Maeshima discloses the terminal according to claim 1, further comprising:

a transmission portion **(See Fig. 2 Items 22A,22B)** configured to access the communication medium **(Para [0005] & [0045])**, in accordance with the control information contained in a previously received control frame **(See Fig 2 Items 21A,21B)**, when the control frame is not received, **(Referring to Fig. 2, Items 22A,22B manage transmission for medium access using the management information stored in Items 21A,21B, when an inconvenience (i.e., control frame not received) in the master control station occurs, see Para [0039-0041] & [0073])**

Regarding Claim 12, Maeshima discloses the terminal according to claim 1, wherein a candidate terminal which transmits the frame containing the control information of the control frame is previously designated by the control station, **(Maeshima, Para [0011])** and the predetermined first time period used when the terminal is designated as the candidate terminal, is shorter than the predetermined first time period used when the

terminal is not designated as the candidate terminal, (i.e., **each designated candidate terminal (i.e., priority order master control station) contain different stand-by times, See Para [0078] & [0012-0013].**

Regarding Claim 13, Maeshima discloses the terminal according to claim 12, wherein the control station gives the candidate terminal a priority (**see Para [0047]**), and a length of the predetermined first time period is determined in accordance with the priority, (**See Para [0012] i.e., each priority order receives different standby times (i.e., length)**)

Regarding Claim 16, Maeshima discloses the terminal according to claim 1, wherein an identifier for the control station is contained in the control frame, (**See Fig. 3 “Control Information Transmission Region” & Para [0045]**)

Regarding Claim 17, Maeshima discloses the terminal according to claim 16, wherein the terminal operates as the control Station when the identifier for the terminal is contained in the frame containing the control information of the control frame, (**See Fig. 3 “Control Information Transmission Region” & Para [0045-0046]**).

Regarding Claim 18, Maeshima discloses a communication method executed by a terminal (see Fig. 1 Terminals 100-107) operable to access a communication medium (See Para [0038]) in accordance with a control frame (See Fig. 3) issued by a control station (See Fig. 1 Terminal 100), the communication method comprising:

detecting the control frame (Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically, See Para [0087] lines 4-7 & Fig. 15 step S21).

which is periodically transmitted from the control station (see Para [0005] & Para [0078] lines 6-12),

the control frame containing control information indicating a time period in which access to the communication medium is permitted, (see Para [0005] & [0045-0046])

issuing a frame containing the control information of the control frame (See Para [0047-0048]), when the control frame is not detected over a predetermined first time period (See Para [0007] & Para [0078] lines 12-19).

Regarding Claim 19, Maeshima discloses an integrated circuit (**see Para [0004]**) for use in a terminal (**see Fig. 1 Terminals 100-107**) operable to access a communication medium (**See Para [0038]**) in accordance with a control frame (**See Fig. 3**) issued by a control station (**See Fig. 1 Terminal 100**), the integrated circuit comprising:

a detection portion configured to detect the control frame, (**Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically , See Para [0087] lines 4-7 & Fig. 15 step S21).**

which is periodically transmitted from the control station (**see Para [0005] & Para [0078] lines 6-12**), and received by a transmission and reception device of the terminal (**see Fig. 2 Items 20A, 20B & Para [0039-0041]**),

the control frame containing control information indicating a time period in which access to the communication medium is permitted, (**see Para [0005] & [0045-0046]**)

an issuance portion configured to issue a frame containing the control information of the control frame (**See Para [0047-0048]**), when the control frame is not detected over a predetermined first time period (**See Para [0007] & Para [0078] lines 12-19**), and transmitting the frame to the transmission and reception device (**see Para [0048]**).

Regarding Claim 20, Maeshima discloses a control method executed by an integrated circuit (see Para [0004]) for use in a terminal (see Fig. 1 Terminals 100-107) operable to access a communication medium (See Para [0038]) in accordance with a control frame (See Fig. 3) issued by a control station (See Fig. 1 Terminal 100), the control method comprising:

detecting the control frame, (Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically , See Para [0087] lines 4-7 & Fig. 15 step S21).

which is periodically transmitted from the control station (see Para [0005] & Para [0078] lines 6-12), and received by a transmission and reception device of the terminal (see Fig. 2 Items 20A, 20B & Para [0039-0041]),

the control frame containing control information indicating a time period in which access to the communication medium is permitted, (see Para [0005] & [0045-0046])

issuing a frame, containing the control information of the control frame (See Para [0047-0048]), when the control frame is not detected over a predetermined first time period (See Para [0007] & Para [0078] lines 12-19), and transmitting the substitute frame to the transmission and reception device, (see Para [0048]).

Regarding Claim 21, Maeshima discloses the terminal according to claim 1, further comprising a control frame memory portion (see Fig. 2 Items 21A, 21B) configured to store the control information contained in the control frame, (See Para [0040])

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima (Of Record) in view of Kita et al. (US 2003/0054821).

Regarding Claim 3, Maeshima discloses the terminal according to claim 1, wherein when the detection portion detects, (Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically, See Para [0087]

lines 4-7 & Fig. 15 step S21), before a predetermined second time period elapses (**see Para [0078] lines 12-19 i.e., "time continuously"**)

after the control frame has been most recently received (**see Para [0045]**) a request frame containing information representing a request for allocating a transmission band in which another terminal performs transmission to the control station,(**see Para [0074]**) the issuance portion issues a response frame containing information (**See Para [0047-0048]**)

However Maeshima does not disclose the issuance portion issuing a response frame indicating the request from another slave terminal is rejected. However the limitation is known in the art of communications by evidence of Kita et al. (US 2003/0054821).

Kita teaches a master device has an option of rejecting or accepting a request from a slave device (**see Fig. 1 & Para [0021-0028]**).

(Kita teaches there is a need to provide a technology capable of simply configuring a wireless communication network that ensures security by having a Manager (i.e., master) implement a search module for a processing device for a predetermined period, **see Para [0037-0039]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to reject a request frame from another device as taught by Kita, within the system of Maeshima, because the teaching lies in Kita to ensure network security.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima (Of Record) in view of Spartz et al. (US 2004/0002338).

Regarding Claim 4, Maeshima discloses the terminal according to claim 1, wherein when the detection portion detects, **(Referring to Fig. 3, Maeshima illustrates a control frame transmitted from a master control station to slave terminals (see Para [0045] lines 8-14) where in the instance a control frame is not detected (i.e., inconvenience) from the master control frame, the slave terminals are capable of becoming the master control station (see Para [0013]) which means each of the terminals must be able to detect the control frame periodically , See Para [0087] lines 4-7 & Fig. 15 step S21), before a predetermined second time period elapses (see Para [0078] lines 12-19 i.e., "time continuously")**

after the control frame has been most recently received **(see Para [0045])** a request frame containing information representing a request for allocating a transmission band in which another terminal performs transmission to the control station,**(see Para [0074])**

However Maeshima does not disclose issuing no response to the request from another slave terminal. However the limitation is known in the art of communications by evidence of Spartz et al. (US 2004/0002338).

(Spartz teaches a base station (i.e., **Master control station**) may ignore (i.e., **no response**) the request of a mobile station (i.e., **slave station**) for establishing a communication link, **see Fig. 5 & Para [0003]**)

(Spartz teaches a need to provide communication services from a base station operating in accordance with an older release of the standard to an updated mobile station, **see Para [0002]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to issue no response to a request as taught by Spartz, within the system of Maeshima, because the teaching lies in Spartz to provide efficient communication services between a device and base station.

8. Claims 10-11, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima et al. (US 2002/0032025) in view of Isumi (USP 5,815,816).

Regarding Claim 10, Maeshima discloses the terminal according to claim 1, wherein when the control frame is not detected over the predetermined first time period (**see Para [0078]**), the issuance portion transmits the frame containing the control information of the control frame, (**see Para [0047-0048]**)

(Maeshima teaches a problem occurs when only one slave station is prepared to become the master control station and the original master control station that shares the

same power supply with the slave station both experience an inconvenience simultaneously, **See Para [0008]**).

Maeshima does not disclose the issuance portion performing a competition with another terminal and acquiring access to the communication medium as a result, however the limitation is known in the art of communications by evidence of Isumi (USP 5,815,816).

Isumi discloses performing a competition with another terminal and acquire access to the communication medium as a result, (**See Col. 14 lines 30-55**).

Isumi teaches there is a need for digital mobile telecommunications systems which have high extensibility to be utilized, (**See Col. 1 lines 35-52**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to perform a competition with another terminal and acquire access to the communication medium as a result as taught by Isumi, when the control frame is not detected over the predetermined first time period so the issuance portion can transmit the frame containing the control information of the control frame as taught by Massimo, because the teaching lies in Isumi to utilize telecommunication systems which have high extensibility.

Regarding Claim 11, the combination of Maeshima in view of Isumi disclose the terminal according to claim 10, wherein a candidate terminal which transmits the frame

containing the control information of the control frame is previously designated and given a priority by the control station, **(Maeshima, Para [0011])**

the competition is performed such that a terminal having a higher priority has a higher probability of acquiring of access to the communication medium, **(Isumi, Col. 14 lines 41-47).**

Regarding Claim 14, the combination of Maeshima in view of Isumi disclose the terminal according to claim 11, wherein the control station designates the candidate terminal based on information about a communication state of a terminal in the network, **(See Para [0049]; communication state i.e., “electric power, error rate or the like”).**

Regarding Claim 15, the combination of Maeshima in view of Isumi disclose the terminal according to claim 11, wherein the designation of the terminal as the candidate terminal is released, when the control station designates another terminal as the candidate terminal, **(See Para [0059] i.e., terminal 105 is selected as candidate terminal, while terminal 103 is released in priority order)**

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

/ADNAN BAIG/

Examiner, Art Unit 2416

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2416